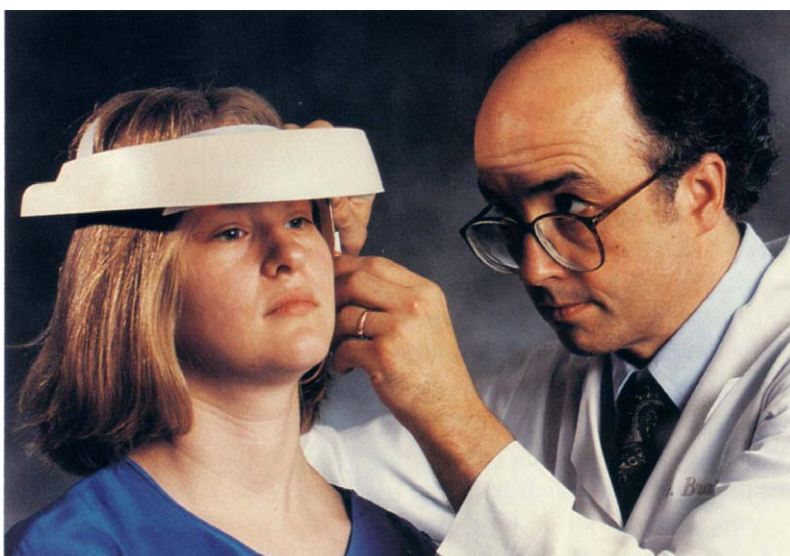


Light Visor™

Seasonal Affective Disorder, or SAD, is a form of depression recognized by the American Psychiatric Association. Brought on by the reduced light and heightened gloom of winter, it is evidenced by such symptoms as depression, a nagging need for rest even after 10-12 hours sleep, weight gain, a craving for carbohydrates, decreased sex drive, and an inclination toward social withdrawal. Some 25 million Americans suffer from a mild form of SAD commonly dismissed as "winter blues." But for 10 million others, it is more serious; clinical depression and other manifestations of SAD become so severe that these people cannot function normally in winter.

In recent years, medical researchers have found that this affliction can be successfully treated with light therapy – use of properly timed exposure to light to change the flow of various chemicals in the body and thus improve mood and performance. NASA has conducted research in light therapy and now employs it regularly as a means of helping astronauts adjust their internal rhythms during orbital flight. Light therapy also has potential for alleviating jet lag among



airline crews and passengers, for keeping military aviators alert on long missions, and for resolving health and performance problems associated with shiftwork.

Dr. George C. Brainard, associate professor of neurology at Jefferson Medical College, Philadelphia, Pennsylvania, has been engaged in light therapy research as a NASA consultant and independently as head of a Jefferson team engaged in development and evaluation of a portable light therapy device that bathes the eyes with bright light to combat SAD. *Above*, Dr. Brainard is adjusting a Light Visor™, a sort of topless hat fitted with small incandescent lights manufactured by BioBrite, Inc., Bethesda, Maryland. The Light Visor allows continuous light therapy without the inconvenience of spending hours at a time before a stationary light box. The light is normally battery

powered, but there is a plug-in option for home use.

Dr. Brainard is a co-inventor of the head-mounted device, along with Dr. Norman E. Rosenthal and Dr. Thomas Wehr, both research psychiatrists with the National Institute of Mental Health (NIMH). The commercial version of the Light Visor pictured is a refined, third generation device, developed in a collaboration among BioBrite, NIMH and Jefferson Medical College that included three years of clinical testing at these and other medical institutions. Dr. Brainard continues to conduct research on various aspects of light therapy, including its applicability to jet lag, shiftwork-related disorders and lighting design for spacecraft interiors.

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